Agronomic Crops

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Agronomic Crops

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	25%	25%		
205	Plant Management Systems	50%	50%		
215	Biological Control of Pests Affecting Plants	10%	10%		
216	Integrated Pest Management Systems	15%	15%		
	Total	100%	100%		

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	22.9	0.5	0.0	0.0
Actual	25.7	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
534445	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
614007	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2769778	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The objective of this program was to assist soybean farmers in Alabama and other soybean growing areas of the U.S by monitoring the spread of Asian soybean rust in 2007, and informing growers about timely and effective management of the disease.

Soybean Rust Activities conducted by the Alabama Cooperative Extension System (ACES) Field Crops team in 2007:

*Education: Grower education was made a priority by members of the Field Crops Team prior to the growing season. Eight county and regional soybean production meetings were conducted with over 300 growers attending, with updates and lessons learned from the 2006 season. In addition to in-state programs, Team members were also invited to speak about their experiences with ASR to growers in Chiapas, Mexico, as well as present information at the National Soybean Rust Symposium in Louisville, Kentucky.

*An Extension circular "Asian Soybean Rust in Alabama," (ANR-1310) http://www.aces.edu/pubs/docs/A/ANR-1310/ANR-1310.pdf was published in 2007. The circular focuses on identification and management of the disease.

*The Auburn University Soybean Rust Hotline: (1-800-446-0388) was updated regularly during the season to keep growers and their advisors informed about soybean rust.

*The Alabama Soybean Rust Sentinel Plot Network: A sentinel plot network for early detection of ASR was established with support from the USDA-APHIS and the Alabama Soybean Producers (checkoff funds), in coordination with the USDA National Soybean Rust Sentinel and Monitoring Network. Twenty soybean sentinel plots were planted in Alabama. In addition, 15 kudzu patches were also monitored weekly for the disease. Sentinel plots were scouted weekly Extension Agents County Agent Coordinators, Specialists and other Extension trained scouts. Over 25,000 soybean leaves were examined at the ALFA Agricultural Services Building, in addition to the large number of leaves that were examined by Extension crops team members in the field.

*Four ASR spore traps were also checked weekly by Extension personnel, in cooperation with the University of Arkansas and Syngenta agrichemical company, to determine if this method could give Alabama producers an even earlier warning of ASR movement into their area.

*All monitoring information was regularly updated on the USDA National Soybean Rust Sentinel and Monitoring Network public website www.sbrusa.net, keeping growers across the U.S. informed of ASR&rsquos movement.

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2. Brief description of the target audience

The primary target audience is commercial producers, pesticide applicators and extension educators.

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V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
Plan	56000	210000	4500	16500
2007	2261	27141	1	0

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2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	10	0	10

V(F). State Defined Outputs

Output Target
Output #1

Output Measure

? This program area will include numerous output activities and methods as part of the Extension Team Projects (ETPs) which are described/explained in the prior "outcome activities and methods sections." The success of many of these outcomes will be formally evaluated/measured by using individual activity evaluation forms designed specifically for each activity, the success of other activities and methods will be measured by the level of participation in the activity. In the target boxes below for each year, we are indicating the number of individual activities within the ETPs for this program area that will be formally evaluated using an evaluation instrument designed specifically for that activity.

Year	Target	Actual
2007	4	0

V(G). State Defined Outcomes

O No.	Outcome Name
1	For regional or county production meetings: determine producer numbers, acreage represented, overall economic interests represented from the participating farming operations, and predict the economic impact of the information presented (note: this will be based on the following: (acreage represented X average yield/acre X average cotton and program price received X predicted percent yield increase or savings in inputs based on the agent's or specialist's knowledge). Targets below represent millions of dollars.
2	Each ACES employee is required to provide a success story on the program activity which they felt best demonstrates the impacts of their work. These success stories contain the following elements: Why: Explain the reason the program was done, or the situation or problem that the program addressed What: Specifically what was done and how it was done. When: If this was a one-time event, the date it occurred. If it is was a series of events, or an on-going program, when it began. Where: Specific location-- the county or counties involved. Who and how many: The &ldquowho&rdquo includes both who did the program and who were the clients of the program, as well as how many people were served. So what: This is the part that gives the real meaning to &ldquosuccess&rdquo. The basic question to be answered in this part is &ldquowhat difference did this program make&rdquo. The difference may be measured in terms of dollars, or in changes in habits, lifestyles or attitudes. Whenever possible use numbers to show the effect of the program. If it is not possible to use numbers, provide a qualitative measurement like client comments or another type of testimonial about the program. Since this program area is very broad in scope and contains multiple Extension Team Projects which have different outcomes measures, the impacts for this program area are best measured in the number and quality of the success stories generated by the individuals who work on these projects. Therefore, one very significant outcome measure is the number of success stories generated.

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Outcome #1

1. Outcome

For regional or county production meetings: determine producer numbers, acreage represented, overall economic interests represented from the participating farming operations, and predict the economic impact of the information presented (note: this will be based on the following: (acreage represented X average yield/acre X average cotton and program price received X predicted percent yield increase or savings in inputs based on the agent's or specialist's knowledge). Targets below represent millions of dollars.

2. Associated Institution Types

•1862 Extension
•1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100000000	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems

Outcome #2

1. Outcome

Each ACES employee is required to provide a success story on the program activity which they felt best demonstrates the impacts of their work. These success stories contain the following elements: Why: Explain the reason the program was done, or the situation or problem that the program addressed What: Specifically what was done and how it was done. When: If this was a one-time event, the date it occurred. If it is was a series of events, or an on-going program, when it began. Where: Specific location-- the county or counties involved. Who and how many: The &ldquowho&rdquo includes both who did the program and who were the clients of the program, as well as how many people were served. So what: This is the part that gives the real meaning to &ldquosuccess&rdquo. The basic question to be answered in this part is &ldquowhat difference did this program make&rdquo. The difference may be measured in terms of dollars, or in changes in habits, lifestyles or attitudes. Whenever possible use numbers to show the effect of the program. If it is not possible to use numbers, provide a qualitative measurement like client comments or another type of testimonial about the program. Since this program area is very broad in scope and contains multiple Extension Team Projects which have different outcomes measures, the impacts for this program area are best measured in the number and quality of the success stories generated by the individuals who work on these projects. Therefore, one very significant outcome measure is the number of success stories generated.

2. Associated Institution Types

•1862 Extension

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3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	6	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
215	Biological Control of Pests Affecting Plants

V(H). Planned Program (External Factors)

External factors which affected outcomes

? Natural Disasters (drought,weather extremes,etc.)

Brief Explanation

Because of intense monitoring by team members, and the severe drought, few fungicide applications were made by Alabama growers for rust control in 2007. A fungicide application for soybean rust would typically cost about $20/acre. Prior to the season, we anticipated that most growers would spray at least once for the disease during 2007. With approximately 150,000 acres of soybeans planted in 2007 we estimated the cost of spraying at about $3 million. Because of our educational programs prior to the season and the intense monitoring program conducted during the growing season we were able inform growers that fungicide applications in the majority of counties were not justified to control soybean rust in 2007. Confidence in Extension monitoring and educational efforts by soybean producers resulted in a significant number of growers not spraying for the disease, with estimates of less then 15% of the soybean acres sprayed. This resulted in a grower savings of over $2.5 million in application costs, while still protecting the soybean crop from damage from ASR. An even greater impact of the program was felt nationally, as growers in Midwestern and other states with much larger soybean acreages closely tracked the Alabama and national monitoring efforts. Assuming that 50 million acres in the U.S were not unnecessarily treated for ASR, because of grower confidence in monitoring efforts, over $1.0 billion in fungicide application costs were potentially saved by U.S. soybean growers in 2007.

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V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

? Before-After (before and after program)

Evaluation Results

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Key Items of Evaluation